

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A first hard-macro arranged on a semiconductor chip and constituting a part of a semiconductor integrated circuit that includes plural blocks and plural hard-macros other than the first hard-macro that are connected to each other with signal wires, including at least one ~~said~~ signal wire passing through said first hard-macro, wherein said at least one signal wire is formed in said first hard-macro before said first hard-macro is arranged on said semiconductor chip, and said at least one signal wire starts at a first outer edge of said first hard-macro and terminates at a second outer edge of said first hard-macro intersecting with said first outer edge, wherein said at least one signal wire is not a power supply line through which power is supplied to said semiconductor integrated circuit from a power supply.

2. (previously presented) The first hard-macro as set forth in claim 1, wherein said first and second outer edges are perpendicular to each other.

3. (previously presented) The first hard-macro as set forth in claim 1, wherein said first and second outer edges are adjacent to each other.

4. (previously presented) The first hard-macro as set forth in claim 1, wherein said at least one signal wire is L-shaped.

5. (previously presented) The first hard-macro as set forth in claim 1, wherein said at least one signal wire is linear.

6. (currently amended) A hard-macro arranged on a semiconductor chip and constituting part of a semiconductor integrated circuit, said ~~hard-wire macro~~ hard-macro comprising at least one wire passing ~~therethrough~~ through inside of said hard-macro and that starts at a first outer edge of said hard-macro and terminates at a second outer edge of said hard-macro intersecting with said first outer edge,

wherein said hard-macro has a cut-out including a corner of said hard-macro, and said wire extends along said cut-out between said first and second outer edges.

7. (original) The hard-macro as set forth in claim 6, wherein said cut-out is rectangular, and said wire is L-shaped.

8. (previously presented) The first hard-macro as set forth in claim 1, further including a repeater inserted in said at least one signal wire.

9. (currently amended) The first hard-macro as set forth in claim 1, wherein said first hard-macro includes a plurality of said at least one signal ~~wires~~ wire passing ~~therethrough~~ through inside of said first hard-macro.

10. (currently amended) The first hard-macro as set forth in claim 9, wherein each of said plurality of ~~signal wires~~ are said at least one signal wire is equally spaced away from adjacent ones.

11. (currently amended) The first hard-macro as set forth in claim 9, wherein at least one of said plurality of ~~signal wires~~ said at least one signal wire includes a repeater inserted therein.

12. (currently amended) A hard-macro arranged on a semiconductor chip and constituting part of a semiconductor integrated circuit, said ~~hard-wire macro~~ hard-macro comprising at least one wire passing ~~therethrough~~ through inside of said hard-macro and that starts at a first outer edge of said hard-macro and terminates at a second outer edge of said hard-macro intersecting with said first outer edge,

wherein said wire is divided into a plurality of portions each of which is arranged in each of a plurality of hierarchies of said hard-macro.

13-16. (canceled)

17. (currently amended) A floor-planner comprising:
an input section, a controller, and a display section,
said input section providing inputs to a program in said controller that causes said display section to display a floor-plan of a semiconductor device that includes a hard-macro;

the program analyzing the floor-plan and causing the floor-plan to include at least one wire passing through inside of the hard-macro and that extends from a first outer edge of said hard-macro and terminates at a second outer edge of said hard-macro intersecting with said first outer edge, wherein said wire is divided into a plurality of portions each of which is arranged in each of a plurality of hierarchies of said hard-macro.

18. (previously presented) The floor-planner as set forth in claim 17, wherein the program analyzes a route of said wire.

19. (canceled)

20. (previously presented) The floor-planner as set forth in claim 23, wherein the program analyzes a route of said wire.

21. (previously presented) The hard-macro as set forth in claim 6, wherein said hard-macro is a random access memory (RAM).

22. (previously presented) The hard-macro as set forth in claim 6, wherein said hard-macro is a phase-locked loop (PLL) circuit.

23. (currently amended) A floor-planner comprising:
an input section, a controller, and a display section,
said input section providing inputs to a program in said controller that causes said display section to display a floor-plan of a semiconductor device that includes a hard-macro;

the program analyzing the floor-plan and causing the floor-plan to include at least one wire passing through inside of the hard-macro and that extends from a first outer edge of said hard-macro and terminates at a second outer edge of said hard-macro intersecting with said first outer edge,

wherein said hard-macro has a cut-out including a corner of said hard-macro, and said wire extends along said cut-out between said first and second outer edges.

24. (new) The hard-macro as set forth in claim 6, wherein said at least one wire is not a power supply line through which power is supplied to said semiconductor integrated circuit from a power supply.

25. (new) The hard-macro as set forth in claim 12, wherein said at least one wire is not a power supply line through which power is supplied to said semiconductor integrated circuit from a power supply.

26. (new) The hard-macro as set forth in claim 23, wherein said at least one wire is not a power supply line through which power is supplied to the floor-planner from a power supply.